UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,170	02/23/2005	Fuminori Satoji	JCLA12206	6501

23900 7590 12/07/2010

J C PATENTS
4 VENTURE, SUITE 250
IRVINE, CA 92618

EXAMINER	
KRAUSE, JUSTIN MITCHELL	
ART UNIT	PAPER NUMBER
3656	

MAIL DATE	DELIVERY MODE
12/07/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,170	SATOJI ET AL.	
	Examiner	Art Unit	
	JUSTIN KRAUSE	3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *07 July 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/1/2010, 7/29/2009, 2/17/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 3 objected to because of the following informalities: claim 3 contains a double inclusion. Line 5 recites "a thrust member attached to one end of the housing". Lines 13-14 repeat the limitation and should be further defined or removed from the claim. Appropriate correction is required.

Claim 7 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must be referred to in the alternative. See MPEP § 608.01(n). Further, as claim 5 has been cancelled, claim 7 cannot depend from claim 5.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase, "to configure a sintered metal to metal connection between said bearing sleeve and inner periphery of said housing" is unclear in light of applicant's arguments which do not make clear whether both the sleeve and the housing are sintered, or only the sleeve is sintered. As presently written, the claim does not require

a sintered housing. Applicant's argument appears to imply the housing must be sintered. Accordingly, the scope of the claim is unclear.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al (US 2002/0025089) in view of Fujinaka (WO02/10602, US Patent 6,832,853 is referenced as an English translation).

Mori discloses a dynamic bearing device comprising

A housing (5)

a sleeve (7) made from sintered metal (paragraph 0022) fixed to the inner periphery of the housing

an axial member (3) having an axial portion (3a) and a flange portion (3b)

a thrust member (51) attached to one end of the housing

a radial bearing portion (11) provided between the sleeve and the axial portion of the axial member, supporting the axial member in a noncontact manner through dynamic pressure of lubricating oil

a thrust bearing portion between the bearing sleeve and the flange portion (Cs1) to support the axial member in a non-contact manner, and between a thrust member and the flange portion (Cs2)

the housing has a cylindrical side portion (5b) and a ring shaped seal portion (9) integrally extending from an upper end of said side portion (as assembled, the ring is deemed to be integral to the housing. Further it is well settled that to make two separate elements integral is obvious to one of ordinary skill in the art. See *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965)) in an inner radial direction,

a seal space is defined between an inner peripheral surface of the seal portion and an outer periphery of said axial portion (see fig 2), and an internal space of the housing sealed with the seal portion is filled with the lubricating oil (within areas 11, Cs1, Cs2) and the oil level is maintained within the space.

Mori does not disclose the housing made of resin.

Fujinaka teaches a housing (2) formed of resin for the purpose of easy manufacturing and assembly.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mori to include a housing formed of resin, for the desired purpose of improving ease of manufacturing as taught by Fujinaka.

Regarding claim 2, Mori discloses the thrust member may be a separate piece (paragraph 0037) but does not disclose how the thrust member and housing side cylindrical portions are joined.

Fujinaka teaches welding a cap to the side cylindrical portions as a means to assemble a separate member (9) to side cylindrical portions of a housing (2) for the purpose of preventing leakage (col 4, line 66- col 5, line 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Fujinaka and weld the thrust member to the side cylindrical portions of the housing for the desired purpose of preventing lubricant leakage as taught by Fujinaka.

Regarding claim 3, Mori does not disclose a seal member on the end where the thrust member is located and fixed on the end by welding.

Fujinaka teaches a thrust member (7) attached to one end of the housing and a seal member (9) fixed on the end by welding to prevent leakage (col 4, line 66- col 5, line 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mori to include a thrust member on one end and a seal member on the end secured fixed on the end by welding for the desired purpose of preventing leakage as taught by Fujinaka.

Regarding claim 4, Mori does not disclose a the sleeve fixed on the inner periphery of the housing by welding.

Fujinaka teaches the known use of heat or ultrasonic welding to secure elements to each other, the welding providing an advantage that the likelihood of deformation is low (col 5, lines 1-10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mori with the teachings of Fujinaka that the use of welding to secure the sleeve to the housing, since welding is not likely to cause deformation of the parts, maintaining precision.

Regarding claim 7, Fujinaka teaches ultrasonic welding as a suitable type of welding.

Regarding claim 9, Mori discloses a diameter of the seal space gradually and downwardly decreases (see fig. 2).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori in view of Fujinaka as applied to claim 1 above, and further in view of Hirata (US 2002/0173431).

Mori does not disclose the outer periphery of the axial portion being formed with a tapered surface opposed to the inner peripheral surface of the seal portion.

Hirata teaches the outer periphery of the axial portion of a bearing shaft to be formed with a tapered surface (2a) opposed to the inner peripheral surface of a seal

portion (see fig. 1) for the purpose of preventing leakage of lubricant from the bearing at high operating speeds.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mori to include a tapered surface opposite the inner peripheral surface of the seal portion for the desired purpose of preventing lubricant leakage at high operating speeds as taught by Hirata.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori in view of Tanaka (US Patent 5,683,183).

Mori discloses a dynamic bearing device comprising

A housing (5)

a sleeve (7) made from sintered metal (paragraph 0022) fixed to the inner periphery of the housing

an axial member (3) having an axial portion (3a) and a flange portion (3b)

a thrust member (51) attached to one end of the housing

a radial bearing portion (11) provided between the sleeve and the axial portion of the axial member, supporting the axial member in a noncontact manner through dynamic pressure of lubricating oil

a thrust bearing portion between the bearing sleeve and the flange portion (Cs1) to support the axial member in a non-contact manner, and between a thrust member and the flange portion (Cs2)

Mori does not disclose that the housing and the sleeve are made of the same type of metal.

(The examiner applies applicant's meaning for the phrase "of the same type of metal" as is stated on page 8, lines 9-16 of the specification)

Tanaka teaches a dynamic bearing having a housing and bearing sleeve made from steel (col. 9, lines 1-2) which are secured to each other by welding (col. 22, line 17) for the desired purpose of improving working accuracy and ease of machining (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mori and form the housing and bearing sleeve from the same type of metal for the desired purpose of improving working accuracy and easy machining as taught by Tanaka.

(To the extent the scope of the claim is understood, the combination satisfies the limitation as claimed, as the housing and sleeve are of the same type of metal, and welded to one another.)

Response to Arguments

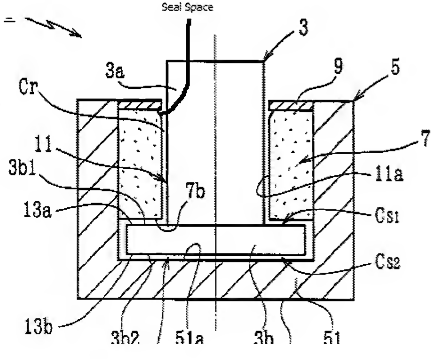
Applicant's arguments filed September 15, 2009 have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that one cannot make the seal portion of because the device could not be assembled. The device as claimed is considered the device in its final form. As is discussed above, elements may be made integral to one another via manufacturing processes. Thus one of ordinary skill would have found it obvious to make the seal ring integral to the housing after assembly.

With regard to the argument that Mori does not identify a seal space, the figure illustrated below discloses an identifiable seal space.



Further, Mori discloses the cavity filled with oil (paragraph 0022, "a dynamic pressure of the fluid (for example, lubricating oil) filled a in a radial clearance Cr between the radial bearing surface 11a and the outer circumferential surface of the shaft portion 3a").

With regard to applicants argument of claim 3, that there is no motivation to fix the thrust member on the end by welding, applicant appears to misconstrue the references. Mori does include an integral thrust member, while Fujinaka does teach a separate thrust member which is subsequently welded to the housing. The intent of the combination is not to provide an additional thrust member to the housing as applicant's argument appears to imply, but rather the combination discloses that the thrust member may be a separate element which is made integral with the housing through the manufacturing process of welding. One of ordinary skill in the art would recognize the equivalence between a monolithic housing such as Mori, and the two piece housing of Fujinaka that is welded together to form a one piece housing. Sufficient motivation for doing so may be found, for example, in ease of manufacturing the elements separately, enabling unique processes to be applied to each piece for separate advantageous purposes, ease of manufacturing the device from two ends rather than a single open end, etc...

In response to applicant's argument that the motivation that welding reduces the likelihood of deformation is not sufficient, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art

cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Applicant's argument with regard to claim 5 is moot, as claim 5 has been cancelled.

With regard to claim 6, applicant's argument renders the claim unclear as it is not clear whether both the housing and the sleeve are sintered, or only the sleeve. The claim as presently written requires a sintered sleeve and both the housing and sleeve to be the same type of metal. Tanaka discloses a steel sleeve and a sintered steel housing which are welded, thereby satisfying the limitations of the claim.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN KRAUSE whose telephone number is (571)272-3012. The examiner can normally be reached on Monday - Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Justin Krause/
Examiner, Art Unit 3656

/Thomas R. Hannon/
Primary Examiner, Art Unit 3656